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ABSTRACT

This publication focuses on the role and training of front-line development workers (paraprofessionals). It describes the non-formal education approach to their training and to the learning which they facilitate among their neighbors. Several pages are devoted to brief project descriptions illustrating some of the ways in which development projects are using and training villagers as change agents in the fields of health and nutrition, family planning, agriculture, education and literacy, management, and community development and leadership. Included in the publication is a selective bibliography on village level change agents, covering the above fields, and a listing of organizations that train front-line development workers in Africa, Asia, and Latin America.
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NFE AND FRONT-LINE DEVELOPMENT WORKERS

In Indonesia, villagers learn a new agricultural practice as they watch one of their neighbors prepare a demonstration plot. In Lesotho, a man directs his neighbors' attention to a chart on the wall of a hut. The group is listening to a radio broadcast that will help them learn to read. In Guatemala, a village mother of four teaches new mothers some child care methods that she learned while attending a short training course at a regional center nearby. These and countless other villagers are part of a growing phenomenon around the world—men and women who often have only minimal literacy skills and a few years of formal schooling are performing development roles previously thought to be the prerogative of highly schooled professionals.

They may be called paraprofessionals, promoters, remedios, village health workers, barefoot doctors or managers, community animators, model farmers, extensionists, monitors, or group leaders. Nevertheless, in all cases they are demonstrating the potential of recruiting local people as community change agents in health, agriculture, nutrition, family planning, small enterprise management and other development areas. Three million barefoot doctors now form the foundation of China's health care system. Over 70,000 villagers have led radio listening groups in Tanzania's mass learning campaigns. We witness in this diffusion of simple innovation and essential services an important development phenomenon that is characteristically people-oriented, cost efficient and not dependent on complex technology.

Rationale. The most obvious reason for the increasing use of paraprofessionals is need. It took more than one million years for the world population to reach one billion persons but only 120 years for that population to double. Adding the third billion took just 32 years and the fourth required only 15 years. Today, some 70 million persons are born every year, the majority of these in less developed areas whose per capita income is equivalent to $50 or less. The magnitude of their needs for more productive agricultural practices, medical care, nutrition and family planning instruction, and for marketing and cooperative services makes the prospect of providing professional services at the grass-roots level slight indeed. There are not enough agricultural colleges, medical schools and other educational services to serve the needs of the world's population, even if it were possible and desirable to fund such training centers.

For the exponential growth rate of the world's population is only one factor in the trend towards the increasing use of paraprofessionals. As planners discover that the gap between the "developed" and the "less developed" nations cannot automatically be bridged with capital, equipment, highly trained professionals and good intentions, they are beginning to re-evaluate conventional approaches to development. The experience of past development efforts has shown that even when rural areas receive massive infusions of capital and personnel, life remains essentially unchanged for many of the poorest villagers. The Green Revolution, for example, dramatically increased yields on large farms through the use of new hybrid seeds, fertilizers and farm machinery. Increased food production unfortunately did not result in more food for the small farmers. Too often, those most in need of assistance either cannot afford the risks associated with a new technology or are bypassed in favor of large productive farmers.

Training and using villagers as paraprofessionals may be one of the most practical alternatives to

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facing these problems. The indigenous community promoter is much more apt to be culturally sensitive to the values and lifestyles of his or her neighbors than is a change agent from the outside, thus increasing the probability that innovative practices will be adapted to fit local needs and resources. A person who is selected for training by his or her community is also more likely to enjoy the respect and confidence needed to provide and develop services, and to have a commitment to staying to work within the village.

Furthermore, paraprofessionals are not only cost-efficient—several dozen village health workers can be trained for considerably less than it would cost to train one physician—but effective. Health programs on every continent are demonstrating that properly trained health workers are able to recognize and treat about 90% of the common diseases that affect their neighbors.

Finally, the use of local people reaffirms the right of persons to be involved as active participants in developmental processes that affect their lives. Community animators, acting in concert with their fellow residents, are promoting the very processes necessary for development of a locally-determined character.

This issue of the *NFE Exchange* focuses on these front-line development workers. It highlights the non-formal education approach to their training and to the learning which they, in turn, facilitate among their neighbors. An overview of programs that use paraprofessionals indicates that the successful use of villagers as change agents depends less on the age, sex or previous education of the villager than on the ability of development personnel to design and implement programs that will fully utilize their potential.

Characteristics. Community promoters may be men or women, young or middle-aged. Often they have only minimal literacy skills and have attended only a few years of formal school. But in all cases they are performing health, medical, agricultural, educational and managerial services in programs previously thought to be the exclusive domain of highly schooled professionals. Most paraprofessionals are engaged in their work on a part-time rather than full-time basis while also maintaining their own domestic and subsistence economic activities. Some are volunteers while others receive a salary paid by their community or the sponsoring agency. Still others may be paid on a minimal fee-for-service basis by their clients.

In almost all cases they have been selected by their fellow villagers, a key element in assuring their future acceptance by the community.

Functions. The approaches to the use of grassroots development agents are as varied as the needs of the people they serve. Villagers may serve as monitors or teachers, giving information and sharing expertise with their neighbors. Some distribute agricultural materials, correspondence lessons, medicine, or family planning supplies. Others perform curative and health care services or work as midwives. Still others act as "model farmers or villagers" teaching others by applying new practices to situations in their own lives. Many serve as catalysts for community organization and development, assessing problems, needs and resources, and working with villagers to develop local programs.

Responsibility. The amount of responsibility given to village promoters also varies from program to program. Village level workers may assist a more highly skilled professional or change agent in the community (e.g., by serving as aides to learning groups or as medical assistants). In many cases, though, paraprofessionals are solely responsible for development activities in their area. They organize learning groups, perform basic health services, stimulate community participation in development efforts, and refer villagers to outside agencies and services.

Training. NFE training programs are highly practical and emphasize learning specific skills rather than completing a prescribed course. Most of the programs are based on either a workshop approach or a combination lecture and workshop format. A number of programs have a practicum component, particularly those in the health field. The length of the initial training period varies from a few days to a few years although short courses of less than one month dominate our data. Weekly or monthly follow-up courses provide additional training and help to maintain the villager's interest in the program. The training is usually conducted near the point of use, either in the community itself or at a nearby center, and is scheduled at times convenient to the villagers.

The content of the training programs focuses on technical skills surrounding a particular task and generally includes some training in leadership, group dynamics, organizational linkages, and communication. Technical information is explained in terms that will be useful to the villagers and many programs have found that simulations and practical exercises are most helpful in teaching villagers.

Support Services. The need to provide material and psychological support services to paraprofes-

sionals is often overlooked as planners concentrate on the training aspect. Yet, the presence of these services is crucial to the long-term success of the program. Without adequate supplies to implement his or her recommendations, the change agent is drastically limited in performing a proper role. Psychological support is equally important. Workers who are given a few days training and then return to isolated villages with no further contact quickly lose interest. Visits by a supervisor not only offer an opportunity for additional training, but also allow that person to check on the worker's competency.

Problems. Difficulties associated with programs involving paraprofessional change agents have been related to community situations or shortcomings of project design rather than to the ability of the villager to perform development roles. For example, some individuals lose interest in the program after they have returned to their communities. Others use their new skills to seek better paying jobs elsewhere. Midwives and traditional healers may practice new techniques for a while and then revert to their former practices. Communities may fail to pay their share of the promoter's salary. Needed supplies and resources may not be available.

Research Needed. There remain many gaps in our knowledge concerning the training and use of paraprofessionals but the success of any program appears to depend on its ability to generate community support; provide relevant, on-going training; and assure that the promoter receives material and psychological support. We know little about the exact combinations of factors needed to create these critical conditions, or about the comparative costs of different approaches to training village level workers. Further research is needed in a number of areas: the process of selecting and monitoring paraprofessionals, characteristics of effective trainers, learning processes of youths and adults with little or no formal schooling, the design of effective instructional materials, the relative merits of various training formats and the provision of support services.

A Concluding Comment. A more intangible but no less important factor in the success of paraprofessional programs seems to be the spirit in which they are designed. Programs which have successfully prepared and employed community change agents are characterized by: the belief that most people can learn almost anything given the appropriate kinds and amounts of training, a respect for cultural values and norms, a willingness to accept traditional practices that have proved effective, and a fundamental commitment to the belief that community-based work is best controlled and carried out by people from that community.

PROJECT HIGHLIGHTS

The brief project descriptions included below indicate but some of the ways in which development projects are using and training villagers as change agents. They are meant to be illustrative rather than exhaustive. We invite all in the *NFE Exchange* network to share any thoughts and materials which you might have on this topic. Should you know of resources or programs which would be of particular interest to others in the network, let us know so that we can help to make this information available to other NFE planners and practitioners. When you write, please tell us what additional topics you would like to see developed in future newsletters.

HEALTH

More and more countries are relying on paraprofessionals to provide health education and curative services. Many of these programs seriously challenge doubts about the ability of villagers to perform medical services. Health auxiliaries are demonstrating that not only can they successfully treat the majority of common diseases in their area, but that they can also recognize cases requiring referral to a more highly trained specialist. Health promoters at the grass-roots level are having an especially important impact in development efforts world-wide.

- In the area surrounding Jamkhed, India, middle-aged women receive ongoing training as village health workers. Every week they leave their villages and travel to a nearby health center for two days of training in health maintenance and education techniques. An additional day of training is provided by the mobile health team which visits each village once a week. The women, who have been selected by the village council, organize feeding and nutrition education programs, counsel pregnant women and their relatives in prenatal care and hygienic delivery techniques, provide family planning services and treat minor illnesses. Literate relatives help them to record each week's activities and the vital statistics for the village. ("A Comprehensive Rural Health Project in Jamkhed (India)" by Mabelle Arole and Rajanikant Arole. *Health by the People.*)

HEALTH (continued)

- Native health aides in Alaska work in their villages but are in direct communication with a physician. The aides, who have little formal education, undergo a brief training period at a field hospital before returning to their villages with a diagnostic manual, a medical kit and a communication link. During daily medical consultations, the health aides report on the symptoms of the patients they have seen and consult with the hospital doctor about changes in the diagnoses or management plans. All health aides use the same frequency and can supplement their training by listening to the exchanges between the doctor and other health workers. ("Telemedicine: Health Care for Isolated Areas" by Dennis R. Foote. *Development Communication Report,* Number 17, January 1977.)

- More than 12,000 family welfare workers in Bangladesh provide health services to villagers who otherwise might never have received modern medical care. The workers, who are mostly male villagers with a high school education, spend several weeks at a training facility where they learn to provide basic health care, to maintain family health records, and to teach villagers about environmental sanitation, water purification and family health. Each worker visits 40 to 50 households each day and usually sees each household once every six weeks. ("Twin Goals in Bangladesh: Preventive Health—People's Participation." *UNICEF News,* Issue 87/1976/1.)

- A six-month training course at Pahlevi University prepares Iranian villagers to serve as paid health auxiliaries in their communities. Refresher courses and regular visits from a university doctor provide support services for the auxiliaries who are selected by their villages and are between the ages of 16 and 45. Initial evaluations of the program have shown that the auxiliaries have had a substantial impact on the infant mortality rate in their villages and that both men and women auxiliaries are accepted by the villagers, though the villagers did indicate that they prefer to consult with older rather than younger health workers. Another evaluation of the program will compare the diagnoses of the paraprofessionals with those of a physician. Preliminary results indicate that, in most cases, the diagnosis and care offered by the auxiliaries is comparable to that available from a more highly trained health professional.

  In a related project in Iran, a school for training behdars or middle level health workers has opened in the small town of Marvdahst. Students will receive four years of training before being sent to small towns or large villages where they will supervise and assist village health workers. ("Health Care for the Most People" by Alexander Dorozynski. *IRDC Reports,* Volume 5, Number 3, 1976.)

- Paraprofessionals are at the core of each level of the Tanzanian health care system. Village level workers receive six months of training before returning to work in their settlements where they are paid by a share of village crops. Rural dispensaries are directed by medical aides who have completed primary or secondary school. These aides attend a three year training course where they learn to use a flow chart to diagnose ailments. Rural health centers are staffed by medical assistants who have attended a slightly more advanced three year training course. At district hospitals, medical assistants who have completed an extra 18 month course perform cesarean sections, appendectomies and other limited types of surgery. Each hospital has at least one doctor who acts as a team leader to coordinate the curative and preventive work of the hospital. ("The New Healers" on *Nova,* a television series of the U.S. Public Broadcasting Service.)

NUTRITION

Changing nutritional habits may be one of the most difficult tasks facing development workers. Even in areas where food is abundant, large numbers of children may suffer from malnutrition because their mothers either must follow local customs and/or lack basic information about nutritional needs. To overcome this, development programs are using community members whose knowledge of local foods and customs is crucial to designing effective programs. In short and practical training courses that explain nutrition concepts in terms easily understood by villagers, community workers and health auxiliaries learn to identify and treat cases of malnutrition and to teach mothers how to select the best local foods for their children.

- Health workers in India received special training in nutrition and communication techniques as part of Project Poshak—an experimental program designed to improve the nutritional status of young children and their mothers through food distribution, nutrition education, and improved health services. In addition to their regular duties at primary and satellite health centers, health workers distributed food, gave cooking demonstrations, visited with families who participated in the program, and conducted informal nutrition education lessons. The health workers participated in a one-week training session and received monthly follow-up training in their own villages. ("Non-formal Education for the Rural Poor: Project Poshak as a Case Study for Consideration" by Margot Higgins. Paper presented at the Michigan State University Conference on Non-formal Education and the Rural Poor, September 1976.)

- Local community leaders and health workers from the Njenteru Health Center in Uganda selected eight young people for training as "nutrition scouts." Equipped with a measuring tape, log sheets, picture booklets written in the local language, and a bicycle, each nutrition scout was to visit 8 to 10 homes a day, examining children for signs of malnutrition and speaking with mothers about the use of local foods. Families whose children had obvious symptoms of malnourishment would be visited once a month, others less frequently. An experienced field worker would supervise the scouts and visit homes that needed special attention. ("Nutrition Scouts: Another First in Uganda" by Jim McDowell. *UNICEF News,* Issue 86/1975/4.)

FAMILY PLANNING

As family planning efforts become less tied to clinics and more involved in community outreach programs, the possibilities for using paraprofessionals are seemingly endless. Shopkeepers and farmers distribute contraceptives and refer villagers to other family planning services. Traditional birth attendants learn to combine modern and traditional health practices and are enlisted as family planning motivators. Door-to-door campaigns use fieldworkers to individually contact the households of eligible couples. Below are but three examples of the different ways in which paraprofessionals contribute to family planning programs.

- In Thailand, villagers distribute contraceptives and receive a small commission on each sale. Volunteers are selected by the village and receive one day of training in family planning techniques during which they are given a 10-point pill checklist and taught to identify symptoms of side effects and contraindications for prescribing pills. Local doctors work with the volunteers, and a district supervisor visits each distributer once or twice a month to check on supplies and to discuss any problems. ("Thailand: Bridging the Gap to Thousands of Villagers." *People*. Volume 2, Number 4, 1977.)
- Mobile teams of midwives and young women with at least a high school education canvas urban areas of the Philippines as part of a door-to-door family planning campaign organized by the Iglesia Ni Cristo in Manila. After each team member has had two weeks of training in family planning methods and motivation techniques, local leaders of a neighborhood are contacted and a team is sent to that area. Members visit the households of eligible couples, urging them to adopt family planning methods and leaving a supply of contraceptives for those who wish. As an incentive to remain in the program, team members receive a monthly salary and an allowance for food and living expenses. ("We really care—The Evangelical Method." *People*. Volume 4, Number 1, 1977. "A Door-to-Door Family Planning Campaign." American Home Economics Association.)
- Alternative approaches to using midwives as family planning motivators were tested in a 1973-74 experiment conducted by Mahidol University in Thailand. Traditional midwives in each of three districts received a four day training course at their local health center. Midwives in two of the districts were told that they would receive a cash payment for each new family planning adopter that they recruited. In one of the districts community leaders were given a one day training course to encourage them to assist the midwives in recruiting new acceptors. A fourth district was used as a control area. (*Traditional Midwives as Family Planning Communicators in Asia* by Everett M. Rogers and Douglas S. Solomon. "Village Volunteers Boost Thai Family Planning." by John Friesen. *IRDC Reports*, Volume 5, Number 2, 1976.)

AGRICULTURE

Many agricultural extension programs have discovered that farmers who have adopted new farming practices are often far more effective change agents than are university graduates who may be regarded with suspicion by the villagers. Some programs such as the Gambian Mixed Farming Centers rely primarily on the demonstration effect in which farmers influence their neighbors by their success (or failure) in adopting new techniques. Others train villagers not only in agricultural but in communication skills—each "farmer scholar" in the Philippines is responsible for training five demonstration farmers who in turn share their knowledge with other farmers. And in Colombia, farmers are active change agents who have been trained not only in agricultural techniques but to encourage their communities to become involved in other types of development projects.

An unresolved issue in training farmers as paraprofessionals is the extent to which the extension program should become involved with individual "model farmers." Critics of this approach contend that such programs reach only the more progressive farmers and tend to strengthen rather than lessen economic differences in the community. To avoid this, projects such as the learning village of the Matia Mulumba Institute (see the section on Community Development) have stressed the importance of working with communal enterprises instead of with individual farmers. Supporters of the model farmer approach argue that it is only the more progressive farmers who can afford to take the risks associated with introducing new agricultural practices. They maintain that as these farmers demonstrate the advantages of the new techniques, small farmers will follow their example.

Both sides of the argument would agree, however, that training villagers as change agents is a critical step in bridging the gap between traditional and modern agricultural practices.

- In the Gambia, young farmers test innovations and share their knowledge with their neighbors. During the dry season when the workload is light, young men who have been sponsored by their father, uncle or village chief, attend an 11 week training program at a nearby Mixed Farming Center. There they learn to make farm implements and receive instruction in basic farming practices. Support services for the farmer training program are provided by yearly follow-up visits to the trainees as well as by demonstrations and fairs at the training center which also serves as the district agricultural office. Extension agents assigned to the centers are encouraged to be in close communication with the farmers and to learn to think in their terms. For example, all training programs emphasize the costs and potential benefits of each innovation. Because the Ministry of Agriculture has found that an agent's credibility is increased and his advice more readily accepted if he can deal expertly with one or two crops, extension activities are organized around a major theme each year enabling agents to focus their extension efforts and to increase their expertise by participating in the annual training sessions held at their centers. (*Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects. Volume II: Case Studies* by Elliott R. Morss *et al.*)

AGRICULTURE (continued)

- Four to seven farmers from each of 39 villages in Cavite Province, the Philippines, were trained as Farmer Scholars in a program operated by the International Institute of Rural Reconstruction. The villagers, who were chosen for the program by local committees, attended a four day training session where they each studied one aspect of agriculture (i.e. rice, vegetable, fruit or grain production; raising livestock; managing cooperatives; etc.). Farmers selected for the program had to be literate, respected by their neighbors, able to use their lands to demonstrate improved farming practices, and willing to share their knowledge with others. Materials used for teaching the villagers were brief, in the language of the learner, related to their daily experiences, and in the form of sequential, easy-to-follow instructions. As important as the technical knowledge presented during the training course was the emphasis on acquiring skills to teach this knowledge to others. Upon returning to their villages, farmer scholars were expected to implement the new practices and to teach five demonstration farmers the new techniques they had learned. These five in turn would share their knowledge with extension farmers. ("The Farmer Scholar Program" by R. W. Roskelly.)

- Farmers who have been trained to work in their villages as paid and volunteer paratechnicians are important factors in the success of the National Community Development Service (NCDS) of Bolivia. When first started as the Rural Development Program in 1964, the project had difficulty in persuading rural communities to request outside assistance. Today, the service receives more requests for projects than it can handle and many communities are requesting and partially funding second, third and fourth projects for their areas.

  The change began in 1965 when the RDP decided to train and hire rural villagers as paratechnicians and to require communities to finance at least half of the costs of a project. Most of the farmers selected for the one month training course were drawn from the traditional leadership structures of the community. At the training centers, Spanish, Quechua and Aymara speaking instructors (the NCDS employs almost as many Indians as non-Indians) taught courses in community development and modern agricultural practices. Women studied home management, first aid, nutrition and literacy. The most promising of the trainees were offered a modest part-time salary in exchange for their efforts to promote and supervise community development activities in their own and surrounding communities.

  As the credibility of the service was established, the NCDS gradually shifted its strategy to training volunteer community leaders rather than paid paratechnicians. NCDS leaders insist that these volunteers are as effective if not more so than the paid workers. (*Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects, Volume II: Case Studies* by Elliott R. Morss *et al.*)

BASIC EDUCATION AND LITERACY

Basic education programs for children and adults increasingly rely on the use of paraprofessionals to meet the special needs of the rural and urban poor. An experimental program in India demonstrates how literate villagers may be one solution to providing culturally relevant educational programs.

- Villagers in the area surrounding the Social Work and Research Centre in the Ajmer District of Rajasthan, India, are trained as primary school paraprofessionals in an experimental program that seeks to provide a basic education for non-school going children aged 6-11. Currently serving as teachers are two priests, three farmers and a widow, all of whom have completed secondary school and received a month of additional training. While using the same syllabus as the formal school system, the project employs a different instructional methodology and incorporates courses in animal husbandry, gardening and personal hygiene. The schools' animals and gardens provide the opportunity for live demonstration to reinforce classroom experience. By emphasizing the cultural and folk aspects of a child's environment, the SWRC hopes to help the child and his or her parents to perceive a link between education and their daily lives. (*Preparatory Report: Primary School Educational Research Project* and *The Profile of a Concept in Practice* by the Social Work and Research Centre.)

COMMUNITY DEVELOPMENT AND LEADERSHIP

At the core of almost any successful development program are highly motivated individuals who demonstrate a commitment to the program, an ability to work with people, and an understanding of the organizational climate in which they must operate. Finding ways to provide fieldworkers with leadership skills that will enable them to work effectively within their cultural situation is perhaps the greatest challenge faced by development personnel.

The community development programs listed below demonstrate but some of the ways that paraprofessionals who have received leadership training may work in their communities. Paraprofessional programs may seek to strengthen leadership skills within existing groups...start new groups or communal enterprises...or to provide support for media learning groups.

- The Bangladesh Rural Advancement Committee (BRAC) trains villagers to become front-line development workers in health, literacy, family planning and agriculture. BRAC believes that genuine development will only occur when villagers participate in development efforts on their own behalf. BRAC staff members live in base camps near the villages, do their own farming and, by demonstrating successful agricultural and health practices, gradually gain the acceptance of the villagers. Staff members train local people who will serve as facilitators for youth groups, women's organizations and cooperatives. The type of development workers and paraprofessionals trained depends on the stated needs and desires of the villagers. In one village the needs may lead to the training of functional education facilitators; another may request training for

COMMUNITY DEVELOPMENT AND LEADERSHIP (continued)

paramedics; and still another may identify agriculture as its major problem, in which case model farmers are trained. Continuous evaluation helps the BRAC staff to determine the most successful teaching methods and materials. Ongoing training sessions remind staff members that their role is not to show the villagers what problems they have or to tell them how to solve problems, but to generate the interest and skills that will enable villagers to do this themselves. ("BRAC" *World Education Reports*, Number 13, November 1976.)

- Twenty-two families, each from a different community and selected by fellow villagers, spend three months at a "learning village" operated by the Matia Mulumba Institute in Colombia. While at the village the adults study health, work, housing, recreation, trade, and political culture and religion. All courses reflect the Institute's commitment to developing self-sufficiency in leadership and economy by encouraging people to use locally available resources and to adapt development ideas to their local culture. The Institute believes that providing all-round training for a few individuals tends to create leaders who subsequently cannot be replaced. To promote active involvement of the population, the Institute seeks to train 18 families per village, three in each of the areas mentioned above.

  The families return to their villages to act as leaders in setting up communal enterprises of at least five families. To encourage economic self-sufficiency and to avoid the problems of dependency on outside experts, no industries are set up for which the inhabitants have not as yet had any training.

  Since its beginning in 1971, the Institute has held 20 training courses reaching over 600 families, set up ten health centers run by "remederios" trained in the learning village, established 63 communal enterprises, and provided literacy training for 1200 adults. ("Promoting Self-Reliance in Colombia: the Work of the Matia Mulumba Institute" by Beatriz Bracco in *Ideas and Action*, 114/1977/1.)

- Literate villagers who have experience in decision-making serve as monitors for the Gezira Rural Television Project, an integrated development project designed to introduce new farming patterns and other development information to the farmers of the Sudan. Monitors for local television clubs are selected in consultation with the village development council and attend a one week training session at the project's headquarters in Barakat. At the session, they learn how to organize TV clubs, serve as discussion leaders, gather data for evaluation, and to operate and maintain the equipment. (TV sets for the villages are supplied by the project but villages sign an agreement to pay for the sets in three installments). Through group discussions and simulations, the monitors learn to think about the processes of development and to help the villagers transform discussion into local action.

  Complete participation by the villagers is a cornerstone of the project. A liaison office links the villagers and the production unit. Programs are filmed in situations familiar to the farmers and, heeding the advice of one farmer who said that the last thing he wanted to see at the end of an exhausting day at the fields was a program on agriculture, try to combine educational messages with entertainment. ("Rural Television: Sudan's First Experiences" in *Ideas and Action*, 110/1976/3. Interested persons may obtain a copy of J. Novotny's "Pictorial Brief on Sudan's 17-FH Project" by writing to the Coordinator's Office, FFHC/AP, FAO, 100100 Rome, Italy.)

MANAGEMENT

The use of paraprofessionals for management and vocational training is an area about which we have little information. But the results of an experiment in Kenya that used youths with no previous business experience to help small businessmen suggest that paraprofessionals have an important role to play in this as well as in the more conventional extension areas.

- There are more than 25,000 small general shops in Kenya, many of which have not adopted simple bookkeeping measures and, though many of these businessmen and women believe that a lack of capital is their main problem, surveys have indicated that often they poorly deploy what capital they have. Conventional courses have generally been inadequate to meet the needs of most of these traders—few have enough education to understand the general business principles that must be presented in an introductory course and many are reluctant to discuss specific problems in the presence of their competitors. Clearly, one of the best solutions would be to consult with each shopowner individually, yet experienced managers are probably one of Kenya's scarcest resources.

  An attempt to provide unsolicited individual advice to a wide variety of small businesses indicated that the problems faced by shopowners were very similar and the solutions fairly obvious. This suggested that a standard diagnostic procedure could be developed that would enable inexperienced and relatively unqualified personnel to help businessmen and women with individually tailored advice. To test this hypothesis, Kenyan school-leavers were given two months of training in the procedure developed by the Institute for Development Studies at the University of Nairobi. Students selected for the program had all completed the fourth form but none had any previous business experience and their academic performance was slightly below average. The students spent one day a week in classroom sessions with the rest of their time divided between individual study and on-site experience in the shops.

  During the five months after the training period, each consultant made monthly visits to about 36 shops. An evaluation of the program indicated that shopkeepers adopted an average of three new techniques per shop and that the new techniques were still practiced 18 months later. The shopkeepers who adopted the innovations were not significantly younger nor their shops significantly larger than the sample as a whole, suggesting the the system was equitable and that age was not a barrier to acceptance. ("A Prototype Experiment to Test the Possibility of a Cost Effective Extension Service for Small Scale General Retailers" by Malcom H. Harper.)

SELECTIVE BIBLIOGRAPHY ON VILLAGE LEVEL CHANGE AGENTS

Listed below are some references from the NFE resource collection which deal with village level change agents. We urge you to share with us other case studies and discussions of this subject.

HEALTH

Blumhagen, Rex and Blumhagen, Jeanne. *Family Health Care: A Rural Health Care Delivery Scheme.* **1974. Medical Assistance Programs, Inc., Box 50, Wheaton, Illinois, 60187 USA.** Describes the planning and implementation of a comprehensive rural health program in Afghanistan. Discusses the role and training of the volunteer village health advisor, the physician's assistant, and nutritionists, all of whom serve as paraprofessionals in the system of rural clinics. 105 pp.

Delaney, Frances M. *Low-Cost Rural Health Care and Health Manpower Training.* **1976. International Development Research Centre, P.O. Box 8500, Ottawa, Canada K1G 3H9.** This book is the second volume in a series of annotated bibliographies on low-cost rural health care and health manpower training. Focusing primarily on new models of health care delivery and on the training and utilization of auxiliary health workers, this volume is of special interest to persons involved in planning, operating and evaluating rural health systems. 180 pp.

Denny, Kevin M. *A Review of Alternative Approaches to Health Care Delivery in Developing Countries.* **1974. Management Sciences for Health, One Broadway, Cambridge, Massachusetts, 02142 USA.** Contains summaries of new health care approaches in 14 countries, most of which train and utilize a variety of paraprofessional workers. Each project description includes a list of names and addresses of persons to contact for further information.

Djukanovic, V. and Mach, E. (eds.) *Alternative Approaches to Meeting Basic Health Needs in Developing Countries.* **1975. World Health Organization, 1211 Geneva 27, Switzerland.** Includes case studies of health projects in a number of developing countries, a discussion of world poverty and health problems, and recommendations to WHO and UNICEF for improving health care delivery services. 116 pp.

Dorozynski, Alexander. "Health Care for the Most People." *IRDC Reports,* **Volume 5, Number 3, 1976. International Development Research Centre, Box 8500, Ottawa, Canada K1G 3H9.** Describes the Village Health Worker program in Iran, an adaptation of China's barefoot doctor program to serve the rural poor.

Elliot, Katherine. *The Training of Auxiliaries in Health Care: An Annotated Bibliography.* **London Intermediate Technology Publications, 9 King Street, London WC2E 8HN, England. Overseas price: £ 1.85 p.**

Foote, Dennis R. "Telemedicine: Health Care for Isolated Areas." *Development Communication Report,* **Number 17, January 1977. Clearinghouse on Development Communication, 1414 22nd Street, N.W., Washington, D.C. 20037 USA.** Describes the results of the Alaskan experience in using telemedicine to link health paraprofessionals with field hospitals. Though the Alaskan experiments relied on the use of satellites, and involved video as well as audio consultations, many of the lessons learned from using two-way radio are of interest to other development projects.

"Health Care for All." *UNICEF News,* **Issue 87/1976/1. UNICEF Public Information Division, United Nations, New York, New York 10017 USA.** Entire issue devoted to delivering health care services. Describes projects in Bangladesh, India, China and East Africa that use village level health workers to extend basic health services to remote or poorer communities.

Lisowski, F.P. "The Barefoot Doctor." *Eastern Horizon,* **Volume XI, Number 1, 1976.** Reprint available from the Non-Formal Education Information Center. A discussion of the most significant medical and health force in China today—the barefoot doctor. 6 pp.

Newell, Kenneth (ed.) *Health By the People.* **1975. World Health Organization, 1211 Geneva 27, Switzerland.** Describes a number of case studies in developing countries, many of which have made successful use of paraprofessionals. Also includes a discussion of the problems and issues in planning and evaluating such projects and their contributions to providing better health care. 200 pp.

"Resources Survey: Health Education Overseas." *Educational Development Overseas,* **Volume 1, Number 2, July 1973.** Reprint available from the International Extension College, 131 Hills Road, Cambridge, England CB2 1PD.

Scotney, Norman. *Health Education.* **1975. African Medical and Research Foundation, P.O. Box 30125, Nairobi, Kenya. (Main office: 27 Dover Street, London W.1 England).** A down-to-earth handbook for community health officers. Includes a discussion of education and communication among rural people.

Seaton, Ronald S. and Seaton, Edith B. *Here's How: Health and Education by Extension.* **1976. William Carey Library, 533 Hermosa Street, South Pasadena, California 91030 USA. US $3.45.** A practical, how-to manual on health extension. Includes four case studies and a discussion of problems and ways of looking at them holistically. 123 pp.

Social Work and Research Centre. *Community Health Programme.* **1976. Social Work and Research Centre, Tilonia 305812, Madanganj, Ajmer, Rajasthan, India.** Excellent description of a basic health care program in India. Includes evaluations with comments on training programs for village health workers and problems faced by individual health workers in their villages.

HEALTH (continued)

Wakeford, R.E. *Teaching for Effective Learning: A Short Guide for Teachers of Health Auxiliaries.* **1974. Center for Medical Education, University of Dundee, Dundee DDL 4HN Scotland.** A handbook for trainers that clearly and simply outlines how to plan and evaluate teaching, how to give lectures, how to use audio-visual equipment, etc.

Wilenski, Peter. *The Delivery of Health Services in the People's Republic of China.* **1976. International Development Research Centre, Box 8500, Ottawa Canada K1G 3H9.** Monograph on the overall health care delivery system in China. Includes a section on the training of auxiliary health personnel, including the barefoot doctor and medical workers. 59 pp.

NUTRITION

"Fighting Child Malnutrition." *UNICEF News,* **Issues 85/1975/3 and 85/1975/4. UNICEF Public Information Division, United Nations, New York, New York 10017 USA.** UNICEF has devoted two issues to the problem of malnutrition in children. Included are brief discussions of innovative educational approaches taken to combat malnourishment—"The Grim Facts of Life on Haiti" and "Nutrition Scouts: Another First in Uganda" both mention training programs for nutrition field workers.

Higgins, Margot. "Non-Formal Education for the Rural Poor: Project Poshak as a Study for Consideration." Paper presented at the 1976 Michigan State University Conference on Non-Formal Education and the Rural Poor. Available from the Non-Formal Education Information Center. Describes an integrated program designed to improve the nutrition status of pre-school children and their mothers. 30 pp.

FAMILY PLANNING

American Home Economics Association. "A Door-to-Door Family Planning Campaign." American Home Economics Association, 2010 Massachusetts Avenue, N.W., Washington, D.C. 20036 USA. A description of the family planning campaign organized by the Iglesia Ni Cristo in Manilla in which teams of midwives and young women canvas urban areas of the Philippines to promote family planning.

El-Bushra, Judy and Perl, Susan. *Family Planning Education in Action: Some Community-Centered Approaches.* **1976. International Extension College, 131 Hills Road. Cambridge CB2 1PD England.** Case studies of projects that have integrated family planning efforts with other development initiatives. Presents a variety of approaches and media used to increase awareness and spread information about family planning. Many of the case studies discuss methods for training fieldworkers and community volunteers.

Friesen, John. "Village Volunteers Boost Thai Family Planning." *IRDC Reports,* **Volume 5, Number 2, 1976. International Research and Development Centre, Box 8500, Ottawa, Canada K1G 3H9.** Describes Mahidol University project in which community members are trained to distribute family planning materials and contraceptives.

Hazelden, Duncan and Perl, Susan (eds.) *Talking Family Planning: A Fieldwork Handbook.* **1975. International Planned Parenthood Federation, Education and Training Department, 18/20 Lower Regent Street, London, England SW1Y 4PW. US $5.00 plus postage.** Discusses recruitment, selection and training of family planning fieldworkers.

"Household Delivery: A Four-Country Report." *People,* **Volume 4, Number 1, 1977. International Planned Parenthood Federation.** Discusses the community-based distribution programs in Egypt, Java, Bangladesh, and the Philippines. Includes sections on training village workers.

International Planned Parenthood Federation. *Family Planning in Industry: A Family Planning Review.* **1974.** A comprehensive review of family planning activities for industrial and plantation workers. Includes some case studies and a discussion of trade unions who are often the initiators and sponsors of training programs for family planning motivators. Also includes a chart of projects in third world countries.

Kincaid, Lawrence *et al. Mothers' Clubs and Family Planning in Rural Korea: the Case of Oryu Li.* **East-West Communication Institute, 1777 East-West Road, Honolulu, Hawaii, 96822 USA.** Describes and evaluates the family planning program at Oryu Li, Korea in which mothers are trained to disseminate family planning information.

Peng, J.Y. *et al. Role of Traditional Birth Attendants in Family Planning.* **International Development Research Centre, Box 8500, Ottawa, Canada K1G 3H9.** Proceedings of an international seminar held in Bangkok and Kuala Lumpur, July 1974. Theoretical discussion of the role of traditional birth attendants in different countries and how they can be integrated into family planning efforts.

People, **Volume 2, Number 4, 1975. International Planned Parenthood Federation.** Contains an overview of community-based distribution programs in 33 countries. Also includes brief reports on aspects of fieldworker and volunteer training.

Rogers, Everett and Solomon, Douglas. *Traditional Midwives as Family Planning Communicators in Asia.* **East-West Communication Institute, 1777 East-West Road, Honolulu, Hawaii, 96822 USA.** A review of the program experience of Asian countries in using midwives as family planning communicators. Offers some general guidelines for the more effective integration of traditional health and family planning systems with their modern counterparts.

AGRICULTURE

Ahmed, Manzoor and Coombs, Philip. *Education for Rural Development: Case Studies for Planners.* **1975. Praeger Publishers. Available from the International Council for Educational Development. P.O. Box 217, Essex, Connecticut 06246 USA. US $9.00.** Findings of seventeen case studies on the learning needs of rural youth and adults. Of particular interest are the sections that describe a training program for entrepreneurship in small enterprise and industry in India, a multipurpose training program for small farmers in South Korea, a program to train extension leaders for promoting new rice varieties in the Philippines, and an agricultural credit and cooperative program in Afghanistan. 660 pp.

Ascroft, Joseph *et al. Extension and the Forgotten Farmer.* **Bulletin No. 37. Extension Education, Agricultural University of Wageningen, Wageningen, Netherlands.** Report of a new strategy to promote the adoption of agricultural innovations among the less progressive farmers of the Nyeri District in Kenya. Teachers who had special training in communication skills taught a free three day course at the Farmer's Training Center. As a follow-up activity, extension workers contacted group participants and loans were arranged to allow farmers to implement the new procedures.

Axinn, George and Thorat, Sudhaker. *Modernizing World Agriculture: A Comparative Study of Agricultural Extension Education Systems.* **1972. Praeger Publishers, 111 Fourth Avenue, New York, New York 10003 USA.** A review of approaches to extension education. Includes a discussion of India's village level workers, Japan's "leader farmers" and Nigeria's agricultural demonstrators, primary school graduates who receive eight months additional training at a Ministry of Agriculture school. 195 pp.

Borton, Raymond (ed.) *Case Studies to Accompany "Getting Agriculture Moving"* **1976. Agricultural Development Council, Inc., 630 Fifth Avenue, New York, New York 10020 USA.** Examines a variety of approaches to implementing agriculture innovations in Africa, Asia and Latin America. Includes a discussion of some failures in training agricultural extension agents. In some cases the training components for agricultural workers are only minimally described.

Botswana, University of. *Practical Extension Courses for Training Agricultural Demonstrators.* **1975. University of Botswana, Division of Extra-Mural Services, Botswana Agricultural College, Gaborone, Botswana.** Good resource material for training agricultural demonstrators.

Coombs, Philip and Ahmed, Manzoor. *Attacking Rural Poverty: How Non-Formal Education Can Help.* **1974. International Council for Educational Development, P.O. Box 217, Essex, Connecticut 06246 USA.** An overview of non-formal education for rural areas. Discusses training programs in agriculture and non-farm occupations and the economics of various training approaches.

Gebregziabher, Betru. *Integrated Development in Rural Ethiopia: An Evaluative Study of the Chilalo Agricultural Development Unit (CADU).* **PASITAM, International Development Research Center, 1005 East 10th Street, Indiana University, Bloomington, Indiana 47401 USA. 1975.** A valuable study that discusses the components necessary for success in rural development projects. A large section is devoted to training programs for model farmers, extension workers, and women, all of whom serve as paraprofessionals. 78 pp.

Morss, Elliott R., *et al. Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects.* **Volumes I and II. 1975. Development Alternatives, Inc., 1823 Jefferson Place, N.W., Washington, D.C. 20036. USA.** An analysis of 36 projects in Africa and Latin America to determine elements of success for rural development projects. Volume I summarizes the research approach and findings of the study while Volume II presents write-ups of each of the projects studied. Of special interest are the Gambian Mixed Farming Centers, the Tetu Special Rural Development Program in Kenya, and the National Community Development Service in Bolivia. Volume I (497 pp.), Volume II (410 pp.), Executive Summary (58 pp.). A revised edition of Morss' executive summary, by Kenneth Neff, is available from the Non-Formal Education Information Center.

Orda, Lily G. *Farmer Leaders Training for Community Self-Competence in Agricultural Production.* **1973. Farm and Home Development Office. College of Agriculture. University of the Philippines at Los Baños, Laguna, Philippines.** Describes a two-week training program for model farmers. During the course, which is held at the College of Agriculture, farmers are given technical information about high yield crops which they are then expected to share with their neighbors. 27 pp.

Roskelly, R.W. *The Farmer Scholar Program.* **International Institute of Rural Reconstruction, 1775 Broadway, New York, New York 10019 USA.** An overview of the Farmer Scholar program of Cavite, the Philippines, in which "farmer scholars" attended a four-day training course in agricultural and communication skills. After returning to their villages, each farmer worked with five demonstration farmers for whose training he or she was responsible. 8 pp.

BASIC EDUCATION AND LITERACY

SEAMEO. *Project Impact for Mass Primary Education. Progress Report No. 4.* **1975. INNOTECH, Southeast Asian Ministers of Education Organization, College of Education, University of the Philippines, Diliman, Quezon City, Philippines.** Describes an experimental management system for the delivery of mass primary education. Traditional teachers are replaced by instructional supervisors who act as managers of instruction for as many as 200 primary students. Parents and com-

BASIC EDUCATION AND LITERACY (continued)

munity volunteers provide specialized instruction in areas such as carpentry and agriculture, or are trained to teach reading and other courses on a part-time basis. 148 pp.

Sheffield, James R. and Diejomaoh, Victor P. *Non-Formal Education in African Development.* **1972. African-American Institute, 866 United Nations Plaza, New York, New York 10017 USA.** Case studies of non-formal education projects in Africa. Included is a discussion of the Work-Oriented Functional Literacy Project in Tanzania which used literate farmers and other community volunteers as part of a pilot literacy project which was later expanded to include the entire country. 258 pp.

Social Work and Research Centre. *Preparatory Report: Primary School Educational Research Project* **(1975) and** *The Profile of a Concept in Practice* **(1976). Social Work and Research Centre, Tilonia 305812, Madanganj, Ajmer, Rajasthan, India.** Describes an experimental learning center that will cater exclusively to non-schoolgoing children aged 6-11. Includes a comparative cost analysis of conventional primary schooling vs. the learning center and a discussion of developing a non-formal vs. a formal learning system.

UNESCO. *The Experimental World Literacy Programme: A Critical Assessment.* **1976. UNESCO Press, 7 Place de Fontenoy, 75700 Paris, France.** An evaluation of UNESCO's five-year experimental literacy program. Many of the projects used community volunteers to supplement professional teachers. 198 pp.

COMMUNITY DEVELOPMENT

Barghouti, Shawki M. *Reaching Rural Families in East Africa.* **Programmes for Better Family Living Handbook Series No. 1, 1973. Programmes for Better Family Living, Box 30470, Nairobi, Kenya.** This is an indispensable handbook prepared as a training aid for field workers. Regardless of subject matter specialization, all NFE practitioners should find useful suggestions here for developing their own communication skills. Case study analyses are given both for innovations that have succeeded and others which have failed. Simply written, this would be a helpful tool to persons being trained as front-line development workers.

Berger, Jennifer, *et al. Women's Groups in Rural Development.* **Programmes for Better Family Living, Report No. 15, 1974. Programmes for Better Family Living, P.O. Box 30470, Nairobi, Kenya.** An evaluation of the Women's Group Program introduced in Kenya in 1971. The program sought to strengthen leadership among rural women by increasing their skills in the use of local resources and in group management and planning.

Botswana, University of. *Councillor's Courses.* **1974. University of Botswana, Division of Extra-Mural Services, Gaborone, Botswana.** Reports of leadership seminars held for members of the Tsabong, Serowe, Francistown, and Lobatse village development councils.

"BRAC" *World Education Reports,* **Number 13, November 1976. World Education, 1414 6th Avenue, New York, New York 10019 USA.** Describes the activities of the Bangladesh Rural Advancement Committee, an integrated rural development agency.

Bracco, Beatriz. "Promoting Self-Reliance in Colombia: the Work of the Matia Mulumba Institute." *Ideas and Action Bulletin.* **114/1977/1. Food and Agriculture Organization, Via delle Terme de Caracalla, 00100 Rome, Italy.** Discusses the philosophy and operation of the Matia Mulumba Institute's learning village—where whole families gather to gain skills that will enable them to better participate in the development process.

Center for International Education. *Non-Formal Education in Ecuador 1971-1975.* **1975. Center for International Education, University of Massachusetts, Amherst, Massachusetts 01002 USA.** Summarizes the results of the University of Massachusetts project in community leadership and development in rural Ecuador. Villagers with minimal literacy skills were trained to serve as community facilitors as part of the non-formal education project.

Etling, Arlen Wayne. *Characteristics of Facilitators: The Ecuador Project and Beyond.* **1975. Center for International Education, University of Massachusetts, Amherst, Massachusetts 01002 USA.** Discusses criteria for selecting facilitators of non-formal education in community-based learning groups. 283 pp.

Mindolo Ecumenical Foundation. *Women's Leadership Course.* **1973. Mindolo Ecumenical Foundation, Box 1493, Kitwe, Zambia.** Report of a one day leadership training course organized to help women become better facilitators and develop their leadership skills.

"Rural Television: Sudan's First Experiences." *Ideas and Action Bulletin,* **110/1976/3. Food and Agriculture Organization, Via delle Terme di Caracalla, 00100 Rome, Italy.** Discusses the Gezira Project in the Sudan in which local farmers are trained to serve as monitors for TV learning groups. The programs are designed to provide development information for farmers and to serve as a catalyst for activity.

Yong, Low Foo, "Evolving a Training Program for Voluntary Youth Leaders." *NYLTI Journal,* **January 1973. National Youth Institute, South Buona Vista Road, Singapore 5.** Suggests strategies for developing a training program for voluntary youth leaders.

MANAGEMENT

Bogaert, Michael. "Barefooted Management for Social Change." "Training Tribal Entrepreneurs, an Experiment in Social Change." "First Generation Entrepreneurs Amongst Adivasis." Xavier Institute of Social Service, Purulia Road, Box 9, Ranchi 834 001, India. These monographs discuss the need to develop "barefoot managers" at the grass roots level and describe the Institute's tribal entrepreneurship training program. Of special interest is the training program for tribal youths. In this program, village youths received practical training in different shops in Ranchi while learning mangement principles at the Institute. At the end of January 1975, seven of the 18 youths who completed the training were in business while the others were waiting for their loans to be cleared by local banks.

Harper, Malcolm H. "A Prototype Experiment to Test the Possibility of a Cost Effective Extension Service for Small Scale General Retailers." 1974. Institute for Development Studies, University of Nairobi, Nairobi, Kenya. Discusses the need for a small business extension service in Kenya and describes an experimental program in which relatively unqualified and inexperienced staff were trained to serve as consultants for small businesses.

Macpherson, George A. *First Steps in Village Mechanisation.* **Tanzanian Publishing House, P.O. Box 2138, Dar-es-Salaam, Tanzania. Price: T.Sh. 35-(within Africa); US $8.50 (elsewhere).** Orders should be prepaid and include US $1.00 for airmail postage. Provides practical advice for training villagers to make their own tools and other objects. Self-reliance and people's involvement are at the core of the book which seeks to help people to creatively solve the technological problems in their own environment.

Partnership for Productivity. *Annual Report for 1976.* **Partnership for Productivity (PfP), P.O. Box 243, Kakamega, Kenya.** A report on the activities of PfP, a non-profit organization created to assist small-scale rural enterprises in Kenya. PfP's Rural Enterprise Extension Service uses a "bicycle brigade" of field consultants to provide individual shopowners with on-site advice. The service evolved from PfP's initial efforts to replicate Malcolm Harper's work with school-leavers (see above).

NOTE: North American readers should order UN Publications from UNIPUB, 650 First Avenue, P.O. Box 433. Murray Hill Station, New York, New York 10016 USA.

SOME ORGANIZATIONS WHICH TRAIN FRONT LINE DEVELOPMENT WORKERS

Below is a partial listing of centers in the developing world that offer training courses for community leaders and paraprofessionals. If you are not included, or if you know of an organization that should be, please tell us about your/their activities in this area.

AFRICA

African Medical and Research Foundation, Wilson Airport, P.O. Box 30125, Nairobi, Kenya (Main office: 27 Dover Street, London W.1 England). Offers training programs for health auxiliaries and basic materials on health education. Linked with the East African Flying Doctor Services.

African Training and Research Center for Women (ATRCW), United Nations Economic Commission for Africa, P.O. Box 3001 or 3005, Addis Ababa, Ethiopia. Organizes formal and apprentice in-service training in food and nutrition, family service management, and social welfare. Publishes *African Women,* a quarterly newsletter and serves as a resource center for information on farm and home village technology.

Centre pour la Promotion de la Santé, Kangu-Mayombe, Zaire. Trains health auxiliaries and animateurs to work in villages and in the hospital associated with the center. Also research and study center which prepares health education materials especially designed for use in Africa. French, some English.

Comité National pour l'Alimentation et le Developpement, B.P. 21-175, Abidjan, Ivory Coast. Trains local leaders as animateurs for village nutrition classes.

Institut Africain pour le Developpement Economique et Sociale (INADES), B.P. 8008, Abidjan, Ivory Coast. Trains agricultural extension agents, farmers and women's groups. Primarily correspondence, some seminars. Publishes *Agripromo,* a liaison bulletin for field workers, and provides a library service and resource center for rural development information. Offices in 9 African countries. Materials in French and English.

AFRICA (continued)

Mindolo Ecumenical Foundation, P.O. Box 1493, Kitwe, Zambia. Operates a women's training center. Industry and commerce program trains middle managers.

Partnership for Productivity (PfP), P.O. Box 243, Kakamega, Kenya. Trains youths with no previous business experience to serve as consultants to rural enterprises.

ASIA

Bangladesh Rural Advancement Committee (BRAC), 3, New Circular Road, Maghbazar, Dacca-17, Bangladesh. Trains paraprofessionals in all areas of development. Operates a Training and Research Center (TARC) for training its own staff, representatives of voluntary agencies, youth groups and numerous trainees from the integrated rural development program of the Bangladesh government.

Catholic Council of Thailand for Development (CCTD), National Social Action Center, 2 Soi Saensuk, Prachasongkroh Road, Bangkok, Thailand. Provides training for local leaders.

Center for the Development of Human Resources in Rural Asia (CENDHRRA), 2067 Pedro Gil Street, Santa Ana, Manila, Philippines. Trains "process facilitators" to provide rural communities with development programs. Conducts social science research and operates an Information Clearing House that specializes in case studies prepared by field workers and villagers.

INNOTECH, Southeast Asian Ministers of Education Organization (SEAMEO), College of Education, University of the Philippines, Diliman, Quezon City, Philipines. Trains teacher aides and "paraprofessional teachers" for primary schools and out-of-school children as part of Project IMPACT (Instructional Management by Parents, Community and Teachers.)

International Institute of Rural Reconstruction, Silang, Cavite, Philippines. (U.S. office: 1775 Broadway, New York, New York 10019). Conducts many training activities, one of which is a People's School that trains villagers in development skills.

Social Work and Research Centre, Tilonia 305812, Madaganj, Ajmer, Rajasthan, India. Trains health and education paraprofessionals. Integrated rural development center designed to provide basic services in water location and development, health care, and education services.

Southeast Asia Rural Social Leadership Institute (SEARSOLIN), College of Agriculture Complex, Xavier University, Cagayan de Oro City, Philippines 8401. Offers an 8 month course for rural leaders from more than 14 countries. Also conducts short, specialized seminars in agriculture and appropriate technology. Publishes *Searso Line Newsletter.*

South Pacific Commission, B.P. D5, Noumea Cedex, New Caledonia. Operates the Community Education Training Center (B.P. 5082, Raiwaqa, Suva, Fiji).

Xavier Institute of Social Service, Purulia Road, Box 9, Ranchi 834 001, India. Conducts two-year postgraduate training programs in social service (integral rural development, personnel management or industrial relations) and three year program in business management. Also operates general and tribal entrepreneur development programs, programs for trade unionists and industrial workers, supervisory personnel, and village volunteer training programs. Publishes *Axis Newsletter*, a report of the activities of the Institute and its students.

LATIN AMERICA

Federation of Organizations for Social and Educational Assistance (FASE), Rua das Palmeiras 90, 20.000 Rio de Janeiro G.B., Brasil. Trains technicians in community development. Provides training courses for community leaders.

Movimento de Educacao de Base, Rua S. Clemente, 385 Botafogo, Rio de Janeiro, R.J. 20.000, Brasil. Trains local animators in community development techniques.

MOBRAL (Brazilian Literacy Movement), Fundacao Mobral, Rua Voluntarios da Patria 53, Botafogo, Rio de Janeiro, Brazil.

National Community Development Service, Government Offices, La Paz, Bolivia. Trains volunteers and paratechnicians in community development techniques.

REFERENCE REVIEW

The NFE Information Center has received a number of books rich in resources for community developers and planners on the local level. Highly recommended for their practical nature, these handbooks feature very down-to earth advice and instructions. NFE practitioners in rural areas would be well-advised to request publications lists from the development groups here mentioned. In some cases, publications are available free or at a reduced price to persons in developing countries who do not have the financial resources of an international aid agency.

Liklik Buk: A Rural Development Handbook Catalogue for Papua, New Guinea, 1977, edited by P.R. Hale and B.D. Williams (270 pp). This delightful collection is intended to promote appreciation for technology which people in villages can initiate, maintain and control. Though designed for NFE practitioners in Papua, New Guinea, the handbook should stimulate interest for all grassroots development workers. There are amply illustrated sections on crops and soil management, food preparation, building and road construction, village arts and crafts, energy, health, and promoting village development. One can learn how to make a vegetable nursery, bud a tree, control soil erosion, maintain a food storage house, pasteurize milk, make bread and build an oven in which to bake it, lay a roof, weave a basket, manufacture charcoal, make bricks, tan leather, operate a pressure lamp, build a water wheel, use solar energy, and make clothing. Interspersed throughout are lists of publications and organizations as well as editorial comments and suggestions. An English edition is available from Liklik Buk Information Centre, P.O. Box 1920, Lae, Papua, New Guinea.

A Handbook on Appropriate Technology, 1976, by the Canadian Hunger Foundation and Brace Research Institute. Well-illustrated, this practical book is organized into four sections: appropriate technology concepts—the need for it, options, marketing, group credit; twelve case studies—the smokeless stove in Ghana, farm implements for village cooperatives in Bangladesh, solar distillation in Haiti; information exchange—catalogue of tools, bibliography, groups and people involved in appropriate technology development; perspectives on appropriate technology—how to introduce it into a community, ecological awareness, long-term planning. Copies of the handbook are available from the Canadian Hunger Foundation, 75 Sparks Street, Ottawa, Ontario, K1P 5A5, Canada. Editions are planned in Spanish and French. Regular price $7.00; less to persons in developing countries.

Appropriate Technology Sourcebook, 1976, by Ken Darrow and Rick Pam and Volunteers in Asia, Inc. (304 pp). This is a useful guide to 375 publications dealing with village and small community technology. Topics included are: alternative sources of energy, farm implements, shop tools, agriculture, low-cost housing, health care, water supply, pedal power, and philosophy of appropriate technology. Small-scale systems using local skills and resources are emphasized. The sourcebook also contains 200 illustrations, and gives the price and address for ordering each publication mentioned. Some of the materials are also available in French or Spanish editions. Copies of the book may be ordered from: Appropriate Technology Project, Volunteers in Asia, Box 4543, Stanford, California 94305, USA. Regular price is $4.00. For local groups in developing countries, the price is $2.00. Discounts are given for bulk orders.

Village Technology Handbook, 1977, by Volunteers in Technical Assistance (387 pp). Highly practical and more technical than the *Liklik Buk*, this excellent handbook describes techniques and devices which can be made and used in villages. Some of the practices suggested can be adopted on an individual basis, others require cooperation by many people and, sometimes, by government agencies. The book's aim is to gather in one publication information from many sources which has been found helpful in villages throughout the world. Instructions are accompanied by technical drawings. One can learn how to dig a well, pump water, build small earth-moving devices, irrigate, raise poultry, store food at home, make a mattress, build a bamboo shelter, construct in concrete, make a solar water heater, and do silk screen printing. References are given for further reading in the various areas, and include information on cooperatives and credit unions. Conversion tables are also included. For this, and other "how-to" publications, contact VITA, 3706 Rhode Island Avenue, Mt. Rainier, Maryland, 20822, USA. Price US $9.00.

READERS REQUESTS NOTES

NFE and Community Development

David Radcliffe has produced a thoughtful paper entitled "Community Values and Non-Formal Education," which links the new interest in non-formal education, and education for community development. Community development is taken in its broadest meaning as an orientation toward constructive, cooperative contribution to social development, from the local to the international level.

The paper points out that the "traditional" formal school model has been derived from Western Europe's own modernizing experiences, and exported through colonial domination to the world at large. This model tends, it is argued, toward individualism and competition rather than toward community and cooperation. Formal education developed in conjunction with a form of urban-industrial society that has stressed not only the mastery of man over nature, in contrast to a more harmonious ecological relationship to the environment, but also a similar set of dominant-subservient relationships within society itself, between man and woman, class and class, nation and nation.

Non-formal education exhibits flexibility and an infinite variety of forms. The strength of non-formal education is that, in its very variety, it is able to give more immediate response to specific and localized needs. This characteristic marks its special contribution to community development.

Community development calls to mind programs in adult literacy, agricultural extension work, domestic science, health promotion, family planning and so on. These form the objective matter of community development. Radcliffe's paper is more concerned with the subjective content of the community development process, with education for community values, and with how this relates to the issue of uniformity versus diversity.

Non-formal education gravitates toward the pole of action, formal education to abstraction. In action, non-formal education tends toward variety; formal education toward uniformity and the assimilation of individuals, one by one, to a pre-established ideal.

Radcliffe seeks to expose as a fallacy the assumption that any pedagogy designed for community development would work towards uniformity. Community is seen as a relationship that ideally comprehends and values diversity, while providing a climate for communication. In this it stands in contrast to the assimilative uniformity which has been a principle of most theorizing about modernization.

After developing and illustrating these arguments, Radcliffe concludes that a greater degree of non-formality would enable education to better embrace the variety and complexity necessary for healthy community development. It would further contribute toward a richer and more humane social structure in an increasingly interdependent world.

Dr. Radcliffe has offered to make his paper available to interested participants in the *NFE Exchange* network. Copies are obtainable directly from Dr. Radcliffe, Faculty of Education, The University of Western Ontario, London, Ontario, N6G 1G7, Canada.

Innovators in Post-Secondary Education

INTERVERSITAS is a newly formed "World Association of Experimenters in Post-Secondary Education." The group aims to enable academic innovators the world over to learn from one another in a professional context while searching for solutions to common problems. A worldwide information bank on post-secondary educational experimenters and their projects is planned. Members receive a bimonthly newsletter and have access to the information system, as well as to a job-referral service. Free memberships are offered to persons in developing countries. For further information, contact Dr. Reynold Feldman, Director of Program Development, Northeastern Illinois University, 5500 N. St. Louis Avenue, Chicago, Illinois, 60625, USA.

Institute of Cultural Action

The Institute of Cultural Action (IDAC), whose chairman is Paulo Freire, publishes a series of documents dealing with conscientization in the process of non-formal education, development, and social change. Inquiries may be addressed to IDAC, 27 chemin des Crets, 1218 Grand Saconnex, Geneva, Switzerland.

Designing NFE Teaching Materials

Understanding Print: A Survey in Rural Lesotho of People's Ability to Understand Text and Illustrations., 1976 (59 pp), is one of the research reports produced by the Lesotho Distance Teaching Centre. Established in 1974, the Centre uses distance teaching methods (such as correspondence, booklets, leaflets, radio) to make education more widely available to people in Lesotho. Part of its work is to offer information and instruction of a practical nature to rural people. *Understanding Print* discusses the manner in which the LDTC researched questions regarding how many rural Basotho people could read, how well they understood what they read, how well they understood illustrations and what kind of illustrations they best understood.

Inquiries about this publication (R3) and other activities of the Center may be directed to Paud Murphy, Director, Lesotho Distance Teaching Centre, P.O. Box MS 781, Maseru, Lesotho.

Development Support Communication Service

Sponsored by the United Nations Development Program, DSCS Bangkok is a regional service to assist in the planning and programming of communication systems and information aids to support development. In addition to their advisory and training efforts in twelve countries, the staff of DSCS Bangkok has prepared some thought-provoking and useful papers of likely interest to managers of development programs. Particularly good is a recent (1977) article by Director John L. Woods entitled "Planned Development and Transfer of Technology." In it, he brings together a number of basic concepts related to the management and decision-making process for determining what technology should be developed, adapted, and disseminated at the grassroots level. Some other papers by the Bangkok staff: "Using Modern Communication Methods to Enhance Smallholder Training and Extension Programmes," "Summary Report on the Radio Farm Forum Pilot Project," "Notes and Comments on the Training for Trainers Course," "Integrated Development Programmes Can Be Counter-Productive," "Promoting the Utilization of Mobile Units in Agricultural Extension," "Curriculum Development Workshop for Integrating Population into Agricultural Extension."

Requests for information on DSCS Publications may be directed to: Resource Base, UNDP/DSCS, P.O. Box 2-147, Bangkok, Thailand.

NFE Positions

World Education is seeking to fill two positions: a) Non-formal Education Trainer, Extension Education Project. This is a two-year post in Sudan training women in NFE methods, planning extension activities, and assisting in project management. Applicants should have demonstrated ability as NFE trainer and two years work experience in a developing country. b) Non-formal Education Trainer, Ghana Nonformal Education Project. This is a two-year post in Ghana training fieldworkers in NFE methods, and assisting in project management. Applicant should have demonstrated ability applying group process techniques to educational activities and two years work experience in a developing country. Both positions are available immediately. Inquiries and applications should be directed to Doran C. Bernard, World Education, 1414 Sixth Avenue, New York, New York 10019, USA.

A number of other positions are currently open for planners and practitioners of non-formal education for development. These are opportunities with private and voluntary organizations, both in the United States and in the developing world. For further information, contact the Director of Recruitment, New TransCentury Foundation, 1789 Columbia Road, N.W., Washington, D.C. 20003, USA.

Future Newsletters

The editor would like to hear from NFE fieldworkers concerning your resource needs. Please let us know what kinds of information would best serve your development efforts, and which topics you would like to see treated in future issues of the *NFE Exchange*.

Joan M. Claffey. . . . . Editor

Mary Kay Hobbs, Nancy Lee Radtke, Aurora Pal-Montano, Thomas Mace . . . . . .Research Assistants

You are invited to send information and to make comments and inquiries to the editor at the above address.

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